

ECOS/ASTHO National Childhood Asthma Prevention Initiative

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Environmental Council of the States

What is ECOS?

- The Environmental Council of the States (ECOS) is the national non-profit, non-partisan association of state and territorial environmental commissioners.
- ECOS works by connecting states with one another, with our federal partners and others, in order to help share experiences about how to best manage the environment.
- www.ecos.org

Children's Environmental Health Profiles

- The goal of the project was to collaborate with ASTHO and develop a baseline of the state information and programs available on select children's environmental health issues:
 - Childhood Asthma
 - Childhood cancer
 - Fish advisories
 - Lead Poisoning

Toward an Action Agenda: Strategies to Reduce Environmental Factors that Affect this Disease

- Developed an action agenda for state health and environmental agencies to:
 - Provide options states can use to develop programs to address children's environmental asthma triggers;
 - Inform federal policymakers about states' needs.

Agenda Development Process

- San Diego Meeting in August 2001 with more than 100 state health and environmental agency staff
 - Shared information and reviewed action agenda
 - Finalized the matrix of state asthma programs.
- Integrated recommendations from the topic workshops into the final action agenda;
- Over 250 participants involved in process, representing 41 states and 1 territory.

State Programs Related to Asthma

Working Draft as of August 8, 2001

Please see key at end of table.

	AK	AL	AR	AZ	CA	CO	CT	DC	DE	FL	GA	HI	IA	ID	IL	IN	KS	KY	LA	MA	MD	ME	MI	MN	MO	MS
Data	y		y		y		y		y	y	y		y	y	y	y	y	a		y	y		y	y	y	a
Mortality data (vital records)	y				y	d	y				y	y								y	y		y	y	y	
Hospital discharge or other hospitals					y	d	y		y		y	y	y		y	y	y			y	y		y	y	y	
Emergency room visits						d	y														y			y	y	
Office or clinic (outpatient) visits						d																				
Care utilization - Medicaid/other	y					d	y																			
Behavioral Risk Factor Surveillance System						d	y					y		y						y	y			y	y	
Survey prevalence data							y				y ¹⁶	y								y						
Physician reporting																										
School data				y		d	d			y										y	y			d		
No identified asthma program	x		x	x					x		x		y					x		y				x	x	x
Addressed as part of other programs														y			y			y				y		
Regional-level Coalitions/Planning						y	y					y								y	y			y		
State-level Coalitions/Planning			d	y ^b	y	y	d		y		d	y	y	y		y				y	y		y	y	d	
Local level programs				y	y							y	y							y	y					
Intensive pilot program(s)					y	d	y					d								y						
Asthma Education Programs							y								d					y	y			y		
Parents of affected children					y		y				y			y						y	y					
Parents in general						d	y				y			y		y				y						
Affected children							y				y			y		d				y	y		y			
Health care providers					y	d	y			y ⁸			d	y		d				y	y		y			
Community at large					y	y	y						d	y		y				y	y					
Day care					y		y							y		y				y						
Schools				y ^b		d	y							y		y				y	y					
Asthma patients in general									y ⁸			d	y							y			y			
Actions to Reduce Outdoor Factors																				y			y			
Bans on open air burning					y		y		y		y		y	y		y				y	y			y		
Reductions in air pollution				y	y	y	y		y		y			y	y	y				y	y			y		
Identify affected geographic areas					y	y	d		y			y				y				y	y					
"Spare the Air" programs					y				y		y										y					

Note: This document is considered to be a working draft because state asthma activities are continuing to evolve. For updates or corrections please contact Christine Eppstein, ECOS, at 202-624-3661, or ceppstein@eco.org.

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	AK	AL	AR	AZ	CA	CO	CT	DC	DE	FL	GA	HI	IA	ID	IL	IN	KS	KY	LA	MA	MD	ME	MI	MN	MO	MS
Warnings of high air pollution					y	y	y		y		y	y	y	y	y					y	y			y		
Traffic control or reduction					y	y	y		y		y									y	y					
Integrate environment and health efforts						y	y					y		y	y	y				y	y			y		
Actions to Reduce Indoor Factors:																				y			y			
Environmental tobacco smoke in homes					y		y							y		y				y				y	y	
In-home assistance/intervention							y													y						
Molds													y	y						y				y		
Others: animal, cockroach, air pollutants														y						y				d		
Local jurisdictions take lead											y									y						
Legislative Actions:							y		y						y					y				y		
Research and Studies:																				y	y					
Intervention trials						y																				
Links: triggers and cases			y ¹		y ¹	y	y					y14				y ³				y	y			y		
Risk factors: asthma onset					y ¹															y ⁴						
Indoor air quality studies						y														y4	y					
Outdoor air quality studies						y	d		y			y14	y							y				y		
School-based Programs:															d					y			y	y		
"Tools for Schools" from EPA				y		y	y					y				y				y	y			y		
"Open Airways" from American Lung Association				y		y	y			y		y	d							y	y			y		
Other Curricula													d			d								y		
Local school districts in lead						d																		y		
Direct assistance to schools						d										y				y				y		
Indoor Air Quality plans required for all schools																								y		
Identify high prevalence or high risk schools				y			d													y	y			d		
Healthy Buildings:																				y						
Indoor air program or training															y	y				y				y		
"Healthy Buildings" or "Healthy Homes"							y		y			y								y				d		
Day Care Based Programs:							y																			
Teen Smoking Programs:						y						y	y							y	y			y		
Environmental Education									y			y								y	y			y		

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State Programs Related to Asthma

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	MT	NC	ND	NE	NH	NJ	NM	NV	NY	OH	OK	OR	PA	RI	SC	SD	TN	TX	UT	VA	VT	WA	WI	WV	WY
Data	y	y		y	y	y	n		y	y	y	y	y	y	y	n	y	n		y	y	y	y	n	n
Mortality data (vital records)		y		y						y		y	y	y	y		y			y	y	y	y	y	
Hospital discharge or other hospitals		y		y	y				y	y	y	y	y	y	y		y			y	y	y	y	y	
Emergency room visits				y					y	d		d			y		y						y	y	
Office or clinic (outpatient) visits				y								d											d		
Care utilization - Medicaid/other	y	y		y					y	y		y		y	y								y		
Behavioral Risk Factor Surveillance System				y						y		y		y			y					y	d	y	
Survey prevalence data		y ¹⁵								y		y	y	y									y ¹⁶		
Physician reporting						y						y		y											
School data		y			y								y												y
No identified asthma program	x			x			x			x	x				x	x	y	x	y	x		x	x	x	x
Addressed as part of other programs	y								y						y		y		y			y		y	
Regional-level Coalitions/Planning				y	y				y	y			y	y	y		y						y		
State-level Coalitions/Planning		y		y		y			y	y		y	y	y	y		y	y		y	y	y	y		
Local level programs		y							y	y			y					y		y			y	y	
Intensive pilot program(s)		y							y	y		d		y										y	y
Asthma Education Programs		y							y	y		y	y							y		y	y		
Parents of affected children		y							y				y	y								y	y		
Parents in general									y				y	y											
Affected children		y							y				y	y									y	y	
Health care providers		y		y					y	d		d	y	y									y		
Community at large		y							y				y	y											
Day care		y			y					y			y	y									y		
Schools		y			y				y	y		d	y	y								y	y		
Asthma patients in general		y											y												
Actions to Reduce Outdoor Factors		y			y																				
Bans on open air burning					y				y	y			y	y			y		y	y	y		y		
Reductions in air pollution		y			y					y			y	y			y		y	y			y		
Identify affected geographic areas		y			y				y	y			y	y			y						y		
"Spare the Air" programs																							y		

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		MT	NC	ND	NE	NH	NJ	NM	NV	NY	OH	OK	OR	PA	RI	SC	SD	TN	TX	UT	VA	VT	WA	WI	WV	WY
	Warnings of high air pollution		y			y				y			y		y	y			y	y	y	y		y		
	Traffic control or reduction					y				y	y				y				y							
	Integrate environment and health efforts		y			y							y			y										
Actions to Reduce Indoor Factors			y			y																	y			
	Environmental tobacco smoke in homes		y		y		y			y	y		y	y	y	y						y	y	y	y	
	In-home assistance/intervention		y				y			y			y	y									y		y	
	Molds		y				y			y													y		y	
	Others: animal, cockroach, air pollutants		y				y			y															y	
	Local jurisdictions take lead		y			y																			y	
Legislative Actions:			y																			y				
Research and Studies			y																							
	Intervention trials		y												y	y										
	Links: triggers and cases		y ²			y ³				y	y				y	y										
	Risk factors: asthma onset		y														y									
	Indoor air quality studies		y			y	y			y	y									y	y					y
	Outdoor air quality studies		y			y				y												y	y		y	
School-based Programs:			y			y	y			y	y		y		y								y		y	
	"Tools for Schools" from EPA		y			y	y				y		y	y			y									y
	"Open Airways" from American Lung Association		y			y				y	y		y	y						y				y	y	
	Other Curricula										y				y									y		
	Local school districts in lead														y											
	Direct assistance to schools		y			y	y			y	y		d		y								y	y		
	Indoor Air Quality plans required for all schools										d															
	Identify high prevalence or high risk schools		y			y				y	y			d												
Healthy Buildings:																										
	Indoor air program or training		y								y														y	
	"Healthy Buildings" or "Healthy Homes"		y				y								y										y	
Day Care Based Programs:			y		y		y				y				y							y			y	
Teen Smoking Programs:			y				y			y	y		y		y	y						y			y	y
Environmental Education			y								y		y				y			y		y			y	y

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State Programs Related to Asthma

Working Draft as of August 8, 2001

Sources for the Table

This matrix provides information about state programs related to asthma in children. States shown in [blue](#) are states for which we currently have no data.

The principal information source for this matrix is a set of profiles prepared by the Association of State and Territorial Health Officials (ASTHO) and the Environmental Council of the States (ECOS). Profile information was not submitted by all states. States tended to under-report their programs in the profiles. Consequently, this draft is incomplete. Many existing state efforts are not reflected on this table. We will be happy to add other elements as requested by states. The second information source was a series of interviews with staff of state health and environment departments regarding their asthma or asthma-related programs, and indoor/outdoor air pollution programs.

Data notes for all columns:

"x" and "n" both indicate there is no information on the specific subject;

"y" indicates that a state reported the program indicated on that line;

"d" indicates that a program element is under development or in the planning stage or is expressed as a goal of a management agency but does not yet appear to have been put into effect.

Notes to Programs:

"a" indicates the program is targeted to Medicaid recipients as part of disease management program; "b" indicates the program is coalition not led by state agencies.

Notes to research studies:

1. Study of in-home and school environments.
2. Study to evaluate the relationship between motor vehicle pollutants and exacerbation of asthma, asthma risk factors, and symptom prevalence in children (along the California-Mexico border).
3. Study of links between increases in criteria pollutants (carbon monoxide, sulfur dioxide, nitrogen dioxide, particulate matter, lead, and ozone), temperature, and humidity and increases in hospital admissions for asthma in Central Indiana.
4. Study of pediatric asthma (measurement metric not specified) in relation to incinerators.
5. Study of indoor and outdoor air quality and asthma incidence, looking at hospital admissions for asthma, as well as emphysema, and bronchitis; supplemented by observations from school nurses.
6. Northeast States for Coordinated Air Use Management initiative to link environmental and health data.
7. School based study of prevalence, triggers, and costs. Results due in January 2001.
8. Air quality in portable classrooms.
9. Review of whether air quality standards protect children. Review includes criteria and toxic air pollutants.
10. Monitoring of air quality near schools.
11. Study of children's respiratory health and lung function, in areas near roadways.
12. Study of children in Fresno with asthma, looking at exposures to air pollution and associated prognosis.
13. Southern California air pollution studies. Began in 1991; epidemiological studies of associations between air pollutants and respiratory health and lung function, including for children.

Notes on Surveillance Data.

14. Georgia Pediatric Asthma Prevalence Study (1-18). Georgia Department of Public Health. Spring 2000. One-time baseline.
15. North Carolina School Asthma Survey. 1999 - 2000.
16. Wisconsin Family Health Survey.

Action Agenda/ Workgroup Report Topic Areas

- Reduce Environmental Factors that Contribute to Asthma in Homes
- Reduce Environmental Factors that Contribute to Asthma in Schools and Child Care Settings
- Reduce Outdoor Environmental Factors that Contribute to Asthma
- Collection, Use and Integration of Health and Environmental Data

Outdoor Environments

- Particulate matter
- Nitrogen dioxide (NO₂), Sulphur Dioxide (SO₂)
- Exposure to traffic; diesel exhaust
- Hazardous (toxic) air pollutants.
- Biological particles : pollen, fungal spores, bacteria, and endotoxin.

Indoor and School Environments

- Environmental agencies address outdoors, and occupational agencies address workplaces; environment and health agencies have limited authorities to address such areas.
- Lower level of government presence, level of resources, capabilities, staff training, and continuity.
- Focus on environmental factors requires new partnerships with education departments, school boards, housing entities and building inspection authorities.

Common Data Challenges

- Most asthma strategies focus on medical management and control (health but not environment)
- Understanding relationships between environmental factors and disease is key
 - Some information held by environment agencies
 - Some information held by health agencies
 - Some information not collected

Pilot Projects

- Three with funding from U.S. EPA Headquarters:
California, Wisconsin and Wyoming
- Two with funding from U.S. EPA Region 10:
Idaho and Oregon

California: Goals

- To identify and assess efficiency of current practices to disseminate air quality information to school districts within their region regarding forecasts of unhealthy air quality.
- To develop model practices for local air pollution control districts (APCDs) and air quality management districts (AQMDs).

California - Results

- Four AQMDs: South Coast Air Quality Management District, Sacramento Metropolitan Air Quality Management District, San Joaquin Valley Unified Air Pollution Control District and San Diego Air Pollution Control District.
- Evaluation results were compared and assessed to determine a practical model. A draft of the “best practices” was formulated and addressed recommendations for
 1. Air districts in community air quality information,
 2. School districts on receiving air quality information, and
 3. Schools on planning for poor air quality during the school year.

California - Results

- Recommended *best practices* resulted from the workshop and interviews with after-school sports programs, air and school districts. The document will be on CalEPA CEHC website for public comment for six months.
- Prepared an Action Plan for Schools on Poor Air Quality Days for school districts, which reflects the recommendations of the expert panel and the Grant Team.

Wisconsin: Goal

- To assemble a diverse group of data sets consisting of health, environmental, and housing information for use with spatial analytic tools for the eventual identification of patterns or risk factors correlated with higher rates of asthma prevalence and morbidity.

Wisconsin: Research and Results

- Sources of data included the US Census, commercial data packages to facilitate GIS mapping of census data, WI Hospital Discharge data, USEPA and WDNR air contaminant data. A total of 108 environmental data files have been obtained.
- Works on building data dictionaries and characterizing the data sets by describing the range of values for each variable in the environmental data sets.
- The project will characterize criteria pollutant data over time for the contaminants that have been related to asthma (O₃, NO₂, SO₂, PM_{2.5} and PM₁₀).

Wyoming: Goals

- To determine the prevalence of asthma
- To measure PM at four Wyoming schools and establish associations with increased exacerbations of asthma attacks in children
- To develop a website to provide information on asthma, asthma management and air pollution

Wyoming: Research and Results

- One-page survey developed and mailed to all 379 public schools in Wyoming. (76.5% response rate)
- Four School Study: essential study materials were developed and incentives were included with the asthma kits. Children received asthma kits and were asked to take peak flow readings twice a day for the 20 study days.
- Developed website <http://asthma.wyoming.gov> to provide information on asthma, asthma management and air pollution, and display several links to quality asthma resources and reports resulting from the pilot project.

Oregon: Goals

- To eliminate or reduce asthma triggers in at least 10 target schools
- Implement a campaign to reduce idling around schools

Oregon: Research and Results

- Oregon identified 13 schools to participate in the project; six are implementing the anti-idling campaign.
- Oregon has provided outreach and assistance to each school, including 3,000 anti-idling pledge cards, sample letters, and an anti-idling fact sheet and observation form
- Team progress at each school varied widely; student/teacher evaluation forms were encouraged.

Idaho Healthy Homes, Head Start Pilot:

HHHS: *Collaborative effort between the ID Asthma Prevention and Control Program (IAPCP) and the Western Idaho Community Action Partnership Head Start (WICAP).*

Goals:

- Decrease in-home exposures to environmental triggers of asthma and allergies among high-risk population (some communities had 30% asthma prevalence).
- Increase community capacity to address asthma triggers.
- Sustainability of the project through institutionalization of project objectives.

Idaho: Major Activities

- Master Home Environmentalist (MHE) training for WICAP and IAPCP Head Start Staff and development of a survey to conduct at home visits.
- Customer evaluations entered into a statistical software program. Half of respondents had someone with allergies or asthma in the household.
- Evaluation of the HHHS impact on behavior change and perceived health benefits due to customers' participation.

Idaho: Findings

- Volunteers: 153 out of the 487 WICAP customers (31.4%)
- Behavior change: 80% at the 3-month follow-up
- 40-60% reported perceived health benefits
- Upon completion of the in-home environmental assessment, 93.1% of participants committed to taking at least one action to improve the household environment.

Idaho: Challenges

- Lack of communication within WICAP and between IAPCP and WICAP, resulting in lack of uniformity in collecting the data.
- Illegal immigrants avoided involvement with HHHS for fear of reprisal.
- Some thought that aspects of HHHS were too invasive, or that making changes required too much time or money.

Idaho: Next Steps

- WICAP would like to continue implementing HHHS.
- IAPCP is seeking additional funding so that HHHS can be offered to interested Head Start centers throughout the State of Idaho, and exploring the possibility of adapting the HHHS intervention to be utilized during licensing inspections of child care centers.

Working Collaboratively to Meet One Another's Needs

- Environmental agencies take actions to protect public health: need support from health community
- Health agencies analyze disease trends: need information from environment community

Working Collaboratively to Meet One Another's Needs (continued)

- Need to address environments important for children that fall between the cracks of environmental and health authorities
- Need to enhance ability to understand environmental causes of disease by integrating data and analysis
- Need to build joint planning, actions, and advocacy
- Need to develop integrated health messages, common vocabularies and data sharing protocols, standards and technologies

Thank You!

Contact Information

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